REMARKS

The Office Action mailed on November 13, 2008 has been reviewed. Claims 1-8 and 13 are pending in this application. Claims 1 and 5 have been amended. Claim 13 has been cancelled and claims 14-16 have been added. Support for claims 14-16 can be found, for example, at paragraph [0002] which discusses "periodic functions and aperiodic functions that send and receive data over one or more common data buses" and "scheduling tasks on a common processor."

Examiner Interview Summary

Applicant's representative Jay Wahlquist (Reg. No. 55,705) thanks Examiner Liu for the opportunity to discuss aspects of this application in a telephone interview on February 12, 2009. During the interview, Applicant's representative discussed the interpretation of *In re Bilski* as it relates to the current claims 1-8, and 13. In particular, Applicant's representative discussed how the process steps are tied to the recited system in the claims. Applicant's representative also discussed claims drawn to a system. However, no agreement was reached.

Applicant's representative believes the foregoing summary accurately reflects the substance and scope of the telephone interview on February 12, 2009. Applicant requests notification if the Examiner disagrees with the accuracy or completeness of this summary.

Rejections Under 35 U.S.C. § 101

Claims 1-8 were rejected under 35 USC § 101 because the invention was not implemented on a specific apparatus and merely manipulates and abstract idea and solves a purely mathematical problem without any limitation to practical application. Applicant respectfully traverses this rejection.

Claim 1, as amended, recites:

A method for managing data flow in a system with simultaneous scheduling of aperiodic messages and periodic transmissions on a common bus, comprising the steps of:

(a) using predefined periodic transmission times, calculating data transition points between periodic and aperiodic message transmissions intervals for a hyperperiod of interest in said system;

(b) using said data transition points to produce a series of aperiodic latency estimation inflection points;

(c) collecting data points of aperiodic message transmissions for the hyperperiod of interest in said system;

(d) estimating the aperiodic latency probability at an inflection point in the hyperperiod of interest as being equal to the number of sample data points less than or equal to the said inflection point divided by the total number of collected aperiodic latency sample data points, said data points forming a data point plot that is assumed to be linear between said aperiodic latency inflection points; and

(e) transmitting the aperiodic messages based, at least in part, on the estimated aperiodic latency probability.

As amended, claim 1 includes the limitation "transmitting the aperiodic messages based, at least in part, on the estimated aperiodic latency probability." Transmitting aperiodic messages inherently involves the use of the system recited in claim 1. For example, claim 1 states that the aperiodic messages are transmitted "on a common bus" in the system. Thus, "transmitting the aperiodic messages" is not a step which can be interpreted to be performed entirely in the human mind as it requires interaction with the components of the system. Furthermore, transmission of messages is inherently performed by the recited system. Support for this amendment can be found throughout the specification. For example, paragraph [0001] of the specification states;

"The present invention relates to simultaneous scheduling random or aperiodic messages and periodic transmissions on common hardware. More particularly, the invention relates to transmission of periodic transmissions that are regarded as flight critical and have predefined, static transmission times, whereas the non-critical applications are transmitted in the time remaining."

Additionally, paragraph [0011] discusses "a compact latency estimation representation suitable for use in real-time on actual data" and paragraph [0024] states "The present invention is admirable suited to manage data to ensure guaranteed deadlines for critical closed loop periodic control functions and other related functions." Finally, Fig. 5 and paragraphs [0043]-[0046] discuss "discharge flows" of message transmissions. Hence, no new matter has been added in amending claim 1.

Furthermore, each of the steps of claim 1 requires "a system with simultaneous scheduling of aperiodic messages and periodic transmissions on a common bus." For example, the limitation "calculating data transition points between periodic and aperiodic message transmissions intervals for a hyperperiod of interest in said system" has no meaning in a system without periodic and aperiodic message transmissions. For at least the reasons stated above, claim 1 is tied to the recited system and, thus, directed to statutory subject matter under the test for patent eligible processes set forth in the Federal Circuit decision *In re Bilski,* Appeal No. 2007-1130 (Fed Cir. 2008). Applicant, therefore, respectfully requests that the rejection be withdrawn.

Claims 2-4 depend from claim 1 and, thus, are allowable for at least the reasons stated above with respect to claim 1.

Claim 5 has been amended similarly to include the new limitation discussed above with respect to claim 1. Therefore, Applicant asserts that the arguments presented above with respect to claim 1 are also applicable to claim 5. For at least the reasons stated above, claim 5 is also directed to statutory subject matter.

Claims 6-8 depend from claim 5 and, thus, are allowable for at least the reasons stated above with respect to claim 5.

Applicant, therefore, requests that the rejection of claims 1-8 under 35 U.S.C. §101 be withdrawn.

CONCLUSION

Applicant respectfully submits that claims **1-8 and 14-16** are in condition for allowance and notification to that effect is earnestly requested. If necessary, please charge any additional fees or credit overpayments to Deposit Account No. 502432.

If the Examiner has any questions or concerns regarding this application, please contact the undersigned at the telephone number listed below.

Respectfully submitted,

Date: February 13, 2009   /David N. Fogg/

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